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AMSAT NEWS SERVICE
ANS-348

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

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ANS-348 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 348.01
 From AMSAT HQ Kensington, MD.
December 14, 2014
To All RADIO AMATEURS
BID: $ANS-348.01

SSTV transmissions from the International Space Station

The Russian ARISS team members plan to activate SSTV from the ISS on Thursday December 18 and Saturday December 20, 2014.

Expected SSTV mode will be PD180 on 145.800 MHz with 3 minute off periods between transmissions. A total of 12 different photos will be sent during the operational period.

Start time would be around 14:20 UTC on December 18 and 12:40 UTC on December 20. The transmissions should terminate around 21:30 UTC each day.

For ongoing information visit the ARISS SSTV Blogspot
http://ariss-sstv.blogspot.com/

Also, the full set of archived SSTV images are located at:
http://www.spaceflightsoftware.com/ARISS_SSTV/index.php

Those that receive images can upload to the above link. The best of the best uploads may make it to the blog.

SpaceX CRS-55 will be launching this week and delays in the launch could adjust SSTV operational times.

[ANS Thanks Gaston ON4WF, ARISS-Europe chairman, for the above information]

Upcoming ARISS Contact Schedule

Istituto Tecnico Statale Economico e Tecnologico "Elena di Savoia" -- "Piero Calamandrei", Bari, Italy, direct via IZ7EVR and State Technical Institute of Technology Alessandro Volta, Bitonto, Italy, direct via IZ7EVR
Contact is presently scheduled to be with IRØISS
Contact is a go for: Mon 2014-12-15 15:18:40 UTC 44 deg

Yekaterinburg, Russia, direct via TBD
Contact is presently scheduled to be with RSØISS
Contact is a go for Sun 2014-12-21 11:55 UTC (primary) or Sun 2014-12-21 13:00 UTC (backup)

Kursk, Russia, direct via TBD
Contact is presently scheduled to be with RSØISS
Contact is a go for Thu 2014-12-24 TBD UTC

Kursk, Russia, direct via TBD
Contact is presently scheduled to be with RSØISS
Contact is a go for Fri 2014-12-25 TBD UTC

ARISS is always glad to receive listener reports for the above contacts. ARISS thanks everyone in advance for their assistance. Feel free to send your reports to aj9n at amsat.org or aj9n at aol.com.

For US schools, just a reminder that proposals for hosting an ARISS contact are due December 15, 2014.

[ANS thanks Charlie, AJ9N, for the above information]

OSCAR Number for DESPATCH

Prof. Akihiro Kubota of the Tanegashima Space Center in Japan has informed AMSAT-NA of the successful launch on December 3 of deep space probe DESPATCH.

One important mission for DESPATCH is an experiment in what is called "cooperative diversity communication." In this experiment, an attempt will be
made to collect signals from the spacecraft received not only at the ground station in Tokyo, but also at many ham radio stations around the world. This is
in order to reconstruct the original data from the spacecraft.

Reception of such weak signals to reconstruct data from the spacecraft will require the expertise of exceptionally skilled ham operators. The builders are
thereby providing a rare opportunity to receive radio signals transmitted by a

spacecraft in deep space, and ask for cooperation radio amateurs around the world in the project.

Initially, it was expected that the spacecraft would last only a few days but now it appears that this assessment was pessimistic with a longer life now expected..

Since DESPATCH appears to have met all of the requirements for an OSCAR number, including IARU coordination, I hereby with the authority vested in me be the AMSAT-NA President, do confer on DESPATCH, the OSCAR number Fuji OSCAR 81 or FO-81.

I use the Fuji designation in recognition of the long history of contributions the Japanese have made to Amateur Radio satellites.

I trust that Fuji OSCAR-81's mission will be successful and much valuable date collected.

73,
William (Bill) Tynan, W3XO
OSCAR Number Administrator

Further information about the Cooperative Data Reconstruction project can be found at the link below.

http://despatch.artsat.jp/en/Cooperative_Data_Reconstruction

[ANS thanks Bill, W3XO, for the above information]

UWE-3 CubeSat Update

UWE-3 was launched with FUNcube-1 on November 21, 2013, the team says they will now be temporarily ending operations.

Today, more than one year after launch, there will be a temporary end of operations caused by the end of funding.

However, UWE-3 is in a very good health condition with fully charged batteries and operations may be continued depending on future research plans.

Without any reception from ground, UWE-3 will carry out a warm reset every four days and switch regularly between the redundant on-board processors and radios.
Therefore, UWE-3 will switch back to its nominal frequency of 437.385 MHz.

Nevertheless we appreciate the extensive support we received from the HAM amateurs in the past and hope that also in the future the status of UWE-3 will be monitored with your support, like you did so many times in the past

year.
Thank you so much for the very helpful cooperation in this respect!

UEW-3 News
http://www7.informatik.uni-
wuerzburg.de/forschung/space_exploration/projects/uwe_3/uwe_3_news/

[ANS thanks AMSAT-UK for the above information]

Send your code into space with astronaut Tim Peake KG5BVI

Leading UK space organisations have joined forces with UK Astronaut Tim Peake
KG5BVI and Raspberry Pi to offer students a chance to devise and code their own
apps or experiment to run in space. Two Raspberry Pi computers are planned to be
flown to the International Space Station (ISS) as part of Tim's 6 month mission
and both will be connected to a new "Astro Pi" board, loaded with a host of
sensors and gadgets.

Launched December 10 at an event held by the UK Space Agency, the Astro Pi
competition will be officially opened at the BETT conference (January 21-24) and
will be open to all primary and secondary school aged children who are resident
in the United Kingdom. The competition will be supported by a comprehensive
suite of teaching resources that are being developed by ESERO-UK and Raspberry
Pi.

During his mission to the ISS, Tim Peake KG5BVI plans to deploy the Astro Pi
computers in a number of different locations on board the ISS. He will then load
up the winning code whilst in orbit, set them running, collect the data
generated and then download this to Earth where it will be distributed to the
winning teams.

Speaking at the Astro Pi launch event, Dr David Parker, Chief Executive of the
UK Space Agency, also revealed that the UK Space Agency has been given a £2
million programme, as part of the Chancellor's Autumn Statement, to support
further outreach activities around Tim's mission, particularly to help inspire
interest in STEM subjects.

Tim Peake KG5BVI said I'm really excited about this project, born out of the
cooperation among UK industries and institutions. There is huge scope for fun
science and useful data gathering using the Astro Pi sensors on board the
International Space Station. This competition offers a unique chance for young
people to learn core computing skills that will be extremely useful in their
future. It's going to be a lot of fun!

To help students on their way in developing their code, five inspirational themes have been devised to stimulate creativity and scientific thinking. The themes are Spacecraft Sensors, Satellite Imaging, Space Measurements, Data Fusion and Space Radiation.

In the primary school age category, teams will be asked to devise and describe an original idea for an experiment or application which can be conducted on the Astro Pi by Tim during his mission. The two best submissions will get the opportunity to work with the Astro Pi team to interpret their ideas and the team at the Raspberry Pi Foundation will then code them ready for flight on the ISS.

In the secondary school age group, the competition will be run across three age categories, one for each of Key Stages 3, 4 and 5 (in England and Wales, and their equivalent ages in Scotland and Northern Ireland). In the first phase, competitors can submit their ideas for experiments and applications. At least the best 50 submissions in each age category will win a Raspberry Pi computer and an Astro Pi board on which to code their idea. In phase 2, all teams will develop code based on their original concept and two winning teams will be selected in each age category. The winning teams' code will be readied for flight by the Raspberry Pi Foundation and CGI.

As well as having their code uploaded to the ISS, all winning teams will each receive a class set of Raspberry Pi and Astro Pi boards, meet the Astro Pi team and participate in a winners event during Tim's flight.

In addition to the main prizes, each of the UK space companies supporting the project have offered a prize. These prizes will be awarded to the best submission associated with each of the themes, across the age ranges.

ESERO-UK and Raspberry Pi are developing a comprehensive suite of teaching resources to link to the curriculum and assist teachers of STEM subjects in engaging their students in the competition. As well as explaining how to use and write code for the Astro Pi and its sensors, the resources will provide a context for the Astro Pi in the curriculum and link to teaching subjects and areas.

The first two resources of the series are available now in the National STEM Centre eLibrary and the rest will follow.

Launching the Astro Pi computers, and consequently the successful implementation and completion of this competition is subject to nominal progress through the ESA integration programme and operations on-board the ISS.

BBC TV News: Astronaut Tim Peake KG5BVI invites Raspberry Pi challenge
http://www.bbc.co.uk/news/technology-30415207

Astro Pi: Your code in space http://astro-pi.org/

[ANS thanks the UK Space Agency for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
Lee McLamb, KU4OS
ku4os at amsat dot org